

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1536	423/220,223,228.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:19
L2	1622	95/6,149,187,193,216,230,236.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:20
L3	3059	1 or 2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:20
L4	11	3 and (piperazine near5 carbamate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:20
L5	109	3 and carbamate	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:20
L6	67	5 and salt	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/09/22 17:20
S1	25840	"95".clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:34

## EAST Search History (Prior Art)

S2	146	S1 and \$5piperazine	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:35
S3	96	S2 not alcohol	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:35
S4	73	S3 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:35
S5	853491	S4 and (potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:37
S6	30	S4 and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:37
S7	0	"423.cla.s"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S8	134964	"423".clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45

## EAST Search History (Prior Art)

S9	399	S8 and \$5piperazine	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S10	244	S9 not alcohol	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S11	133	S10 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S12	60	S11 and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S13	21	S12 and (weight adj percent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 09:45
S14	48	S6 or S13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:01
S15	21	S14 not Alkanolamine	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:01

## EAST Search History (Prior Art)

S16	13	S14 not (Alkanolamine or mea or mdea)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:02
S17	1	"10551834"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:08
S18	1590	S8 and (piperazine or amino\$2ethyl\$2piperazine or hydroxy\$2ethyl\$2piperazine or ethylene\$2diamine or dimethyl\$2ethylenediamine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:11
S19	813	S18 not (Alkanolamine or mea or mdea or alcohol)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:11
S20	233	S19 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:11
S21	152	S20 and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:11
S22	744	S18 not (Alkanolamine or mea or mdea or alcohol or diethanolamine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:26

## EAST Search History (Prior Art)

S23	190	S22 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:26
S24	882342	23and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:26
S25	122	S23 and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:27
S26	247	S1 and (piperazine or amino\$2ethyl\$2piperazine or hydroxy\$2ethyl\$2piperazine or ethylene\$2diamine or dimethyl\$2ethylenediamine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:27
S27	85	S26 not (Alkanolamine or mea or mdea or alcohol or diethanolamine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:28
S28	47	S27 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:28
S29	17	S28 and ((potassium adj carbonate) or (sodium adj carbonate) or (lithium adj carbonate) or (hydroxide) or (bisulfide))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 10:28
S30	55	("1783901"   "1951992"   "3071433"   "3653810"   "3965244"   "3989811").PN. OR ("4336233").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:38

## EAST Search History (Prior Art)

S31	35	S30 and piperazine	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:38
S32	17	("4211761"   "4336233"   "4624838"   "5017350"   "5019361"   "5061465"   "5744110"   "6036931"   "6165433"   "6337059"   "6582498").PN. OR ("7056482").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:40
S33	67	S30 or S32	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:40
S34	40	S33 and piperazine	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:40
S35	39	S34 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:41
S36	2	"3,449,239" .pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 10:45
S37	11	("1132679"   "3877673"   "4067703"   "4208387").PN. OR ("5017350").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:15
S38	3	(S37 and piperazine)	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:15
S39	9	("4094957"   "4336233"   "5017350"   "5019361"   "5209914"   "5618506"   "5904908"   "6337059").PN. OR ("6423282").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:16
S40	9	(S39 and piperazine)	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:16
S41	11	("3653804"   "4094957"   "4364915"   "4892674").PN. OR ("5904908").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:18
S42	6	(S41 and piperazine)	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:19
S43	21608	"95".clas.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/18 11:21
S44	25840	"95".clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:22

## EAST Search History (Prior Art)

S45	134964	"423".clas.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:22
S46	157925	S44 or S45	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:22
S47	1759	S46 and (piperazine or aminoethylpiperazine or hydroxyethylpiperazine or ethylenediamine or dimethyl\$2ethylenediamine)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:23
S48	736	S47 and ((carbon adj dioxide) or ("co.sub. 2"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:24
S50	474	S48 and (((potassium or sodium or lithium) adj carbonate) or bisulfide or hydroxide)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:25
S51	169	S50 not alcohol\$2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/18 11:26
S52	1	"10551834"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 13:33

## EAST Search History (Prior Art)

S53	96	piperazine and (carbon adj dioxide) and "95".cls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 15:46
S54	65	S53 and (potassium carbonate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 15:50
S55	27	S53 and (potassium adj carbonate)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 15:51
S56	1557	95/36,149,193,216,187,230,236.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 16:36
S57	973	423/220,223.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 16:36
S58	2490	S56 or S57	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 16:36
S59	88	S58 and piperazine	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/07/12 16:36



## EAST Search History (Prior Art)

S60	1585	95/36,149,187,193,216,230,236.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/03 13:04
S61	998	423/220,223.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/03 13:04
S62	2543	S60 or S61	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/03 13:10
S63	10	S62 and (("not" near5 hinder\$3) or unhinder\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/12/03 13:11